

I CLAIM:

5     1.     A message structure providing a communications protocol for use over a high speed network to control a video source, the message structure having a message header selected from one of:

10            (i)     a command header;  
                 (ii)    a data header; and  
                 (iii)    an answer header.

2.     The communications protocol message structure of claim 1 further including a selected message header that is an interrupt header.

15    3.     The communications protocol message structure of claim 1, where the video source being controlled provides image data.

4.     The communications protocol message structure of claim 1, wherein a message having a command header further includes data fields defining:

20            (i)     a command code;  
                 (ii)    request ID;  
                 (iii)    a message length;  
                 (iv)    a command address; and  
                 (v)     command data.

25    5.     The communications protocol message structure of claim 2, further including a data field defining a version.

30    6.     The communications protocol message structure of claim 2, wherein the data field defining the command code provides unique codes corresponding to a register read command, a register write command, a configuration read command, and a configuration write command.

7. The communications protocol message structure of claim 2, wherein the data field defining the command code provides a unique code corresponding to an action command.

5 8. The communications protocol message structure of claim 2, wherein the command code data field provides unique codes corresponding to a get device info action command; a trigger action command and a re-send packet action command.

9. The communications protocol message structure of claim 8, wherein the 10 command code data field further provides a unique code corresponding to a module reset action command.

10. The communications protocol message structure of claim 1, wherein a message having a data header further includes data fields defining:

15 a packet ID; and  
a data ID.

11. The communications protocol message structure of claim 10, wherein a message having a data header has unique valuetags for a regular message and a re-send message 20 data types.

12. The communications protocol message structure of claim 6, wherein a network node receiving a message containing a command header produces a response message containing an answer header.

25 13. The protocol of claim 10, wherein a message having a data header further includes the data fields defining:

(i) data length;  
(ii) a time stamp; and  
30 (iii) resent image.

14. The protocol of claim 10, further including a format code whereby different types of data can be uniquely identified.

15. The protocol of claim 1, further including an identifier number.
16. A method for communicating data over a network comprising:
  - providing a source of image packets, each such packet including an identifier number; and
  - providing a receiver of image packets to process a series of image packets; and
  - tracking the receiving image package identifier number;
  - producing re-send image packet request for packets not successfully received.